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ABSTRACT OF THE DISCLOSURE

A data conversion apparatus etc. which inhibits octet/bit insertion to reduce a data transmission amount and improve a throughput in a section not requiring octet/bit insertion during communication based on PPP is provided. Further, a communication apparatus which reduces a control packet on a communication line is provided. When transmitting a data signal from DTE to DTE, octet/bit insertion is performed DTE to a data, and transmission is made. In a DCE, a data having a PPP frame configuration and being octet/bit-inserted is converted into a data having an improved PPP frame configuration and being not octet/bit inserted. In a gateway (NW), a data having the improved PPP frame configuration and being not octet/bit inserted is converted into a data having the PPP frame configuration and being octet/bit inserted. After the data conversion, the gateway transmits a signal including the converted data to DTE. In DTE, octet/bit deletion is performed as in the prior art.

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